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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,757	04/09/2004	Peter Willem Mollee	CGL02/0277US02	8790
38550	7590	09/14/2006	EXAMINER	
CARGILL, INCORPORATED LAW/24 15407 MCGINTY ROAD WEST WAYZATA, MN 55391			WHITE, EVERETT NMN	
			ART UNIT	PAPER NUMBER
			1623	

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/820,757	<b>Applicant(s)</b> MOLLEE ET AL.	
	<b>Examiner</b> Everett White	<b>Art Unit</b> 1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 35-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>April 9, 2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 43 is objected to because of the following informalities: Claim 43, line 4, discloses a list wherein the moiety "D-galactose moiety" is recited twice. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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3. Claims 35-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slominski (J. Sci. Food Agric. (1994), Vol. 65, pages 323-330) in view of Kuo et al (J. Agric. Food Chem. (1988), Vol. 35, pages 32-36).

Applicants claim a process for isolating D-galactose comprising: (a) providing a legume composition comprising a plurality of oligosaccharides, wherein at least one of the oligosaccharides comprises a D-galactose moiety; (b) subsequently treating the plurality of oligosaccharides, wherein at least about 20 percent of the oligosaccharides have the D-galactose moiety on a dry weight basis; (c) subsequently hydrolyzing at least a portion of the oligosaccharides having the D-galactose moiety, wherein at least about 60 percent of the oligosaccharides having the D-galactose moiety are converted to D-galactose in monosaccharide form. Additional limitations in the dependent claims include the process wherein treatment of the plurality of oligosaccharides further comprises at least one of extracting, centrifuging, decanting and membrane filtering; the process wherein the legume composition further comprises providing at least one of melibiose, manninotriose, raffinose, stachyose and verbascose. Applicants also disclosed claims wherein the process is carried out using a soybean composition and defatted soybean material.

The Slominski reference discloses the hydrolysis of melibiose, raffinose and stachyose, by contacting the oligosaccharides with  $\alpha$ -galactosidase at 40°C for 60 minutes, to produce galactose, wherein the products are separated by chromatography. (See Slominski, paragraph spanning pages 324 and 325). Also see the first paragraph on page 325 of the Slominski reference wherein the raffinose, stachyose, melibiose and the manninotriose thereof are derived from soya bean meal, which is within the process limitation disclosed in instant Claims 46-49 wherein the D-galactose is isolated from a soybean composition. The raffinose, stachyose, melibiose and manninotriose disclosed in the Slominski reference embraces the raffinose, stachyose, melibiose and manninotriose disclosed in instant Claim 42.

The instantly claimed process for isolating D-galactose differs from the process described in the Slominski reference by claiming a specific percentage of the

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oligosaccharides having the D-galactose moiety that are converted to D-galactose in monosaccharide form (i.e., degree of hydrolysis).

However, it is noted that the duration and amounts of enzymes used in the Slominski reference would necessarily result in the claimed degree of hydrolysis disclosed in instant Claims 35-38, 40, 41, 46 and 48-54. For example, see page 10, 2<sup>nd</sup> paragraph of the instant specification wherein Applicants disclose the hydrolysis is accomplished by holding the mixture comprising enzymatic hydrolyzing agent and said oligosaccharides at a preferred temperature and time between 20°C and 60°C for 10 to 100 minutes, which covers the process disclosed in the Slominski reference at 40°C for 60 minutes (See page 325, 1<sup>st</sup> column, 2<sup>nd</sup> line of the Slominski reference).

The instant claims also differ from the process of the Slominski reference by providing a defatted soybean material in the claimed process. The Kuo et al reference shows that defatting soybean is well known in the art (see page 32, the paragraph under subheading "Sample Preparation"), which embraces the use of defatted soybean in instant Claims 50-54. The Kuo et al reference also shows that subjection of raffinose containing oligosaccharides to procedures such as extraction, centrifugation, and filtration through a membrane (see paragraph bridging pages 32 and 33) is known in the art, which embraces the subject matter of instant Claim 39.

One of ordinary skill in this art would be motivated to combine the teachings of the Slominski reference with the teachings of the Kuo et al reference since both references disclose raffinose oligosaccharides obtained from soybean.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to subject the soybean used in the enzyme hydrolytic process for liberating galactose of the Slominski reference to a defatting procedure in view of the recognition in the art, as evidenced by the Kuo et al reference, that the defatting step is necessary to remove interfering lipids present in large amounts in soybeans.

### ***Summary***

4. All the pending claims (35-54) are rejected.

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***Examiner's Telephone Number, Fax Number, and Other Information***

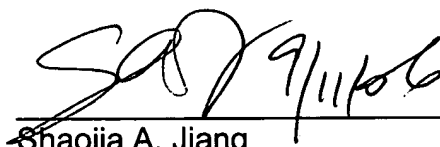
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Everett White whose telephone number is 571-272-0660. The examiner can normally be reached on 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia A. Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



E. White



Shaojia A. Jiang  
Supervisory Primary Examiner  
Technology Center 1600